RAINBOW MUNICIPAL WATER DISTRICT ANNUAL DRINKING WATER QUALITY REPORT 2013

Rainbow Municipal Water District (RMWD) is pleased to provide you the Annual Drinking Water Quality Report for 2013. This brochure is a snapshot of the water quality information that was compiled during 2013. Included are details about where your water comes from, what it contains, and how it compares to Federal and State standards. Last year, we conducted more than 264 tests for total coliform bacteria. The District routinely monitors the distribution system for drinking water contaminants. The California Department of Public Health (CDPH) requires that no more than 5% of the water samples collected per month may test positive for total coliform. The District was in compliance for the entire year.

Coliforms are bacteria, which are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Usually, coliforms are a sign that there could be a problem with the treatment system or the distribution system. Whenever we detect coliform bacteria in any sample, we do follow-up testing to see if other bacteria of greater concern, such as fecal coliform or E. coli, are present.

Where does my water come from?

The District purchases 100% of its treated water from the San Diego County Water Authority (SDCWA). The SDCWA in turn purchases its water from the Metropolitan Water District of Southern California (MWD). Water is delivered to our District from SDCWA and MWD using a complex system of aqueducts and pipes. The water contains a mixture of chlorine and ammonia, which creates a strong disinfectant known as chloramines. Chlorine residual is constantly monitored, and when applicable, the District injects small amounts of chlorine into the water at facilities throughout the District. Should a water quality problem occur, the District is prepared to take remedial action as set forth in an Operational Plan approved by the CDPH.

Source water assessment and its availability

In December 2002, MWD completed its source water assessment of its Colorado River and State Water Project supplies. Colorado River supplies are considered to be most vulnerable to recreation, urban/storm runoff, increasing urbanization in the watershed and wastewater. State Water Project supplies are considered to be most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation and wastewater. A copy of the assessment can be obtained on the MWD website at www.mwd.com or by calling (213) 217-6850.

Certified Operators

The District's water system operators are certified in both water distribution and water treatment. Water system operator competency is critical for the protection of public health and the maintenance of safe, optimal, and reliable operations of water treatment and distribution facilities. CDPH guidelines ensure that operators have the operational skills, knowledge, experience, education, and training required to operate a water system. Once water system operators are initially trained and certified, regular recertification will ensure continual competency. The requirements issued by CDPH will provide baseline standards for efficient and effective State water operator certification programs.

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at (800) 426-4791 or look for it on the EPA's website (www.epa.gov/safewater.com). The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and in some cases, radioactive material and can pick up substances resulting from the presence of animals or from human activity.

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Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- **Inorganic contaminants**, such as salts and metals, that can be naturally occurring or result from urban runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is healthy, EPA and CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

The District routinely monitors for contaminants in your drinking water according to federal and state laws. The table in this brochure shows the results of our monitoring for the period of January 1st to December 31, 2013.

What about lead in my drinking water?

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. RMWD is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA and Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791). Cryptosporidium ("crypto") is a microscopic organism found in rivers and streams and comes from animal wastes in the watershed. When ingested by humans, it may result in a variety of gastrointestinal symptoms including diarrhea, nausea and fever. MWD has tested for crypto in its treated water supplies for years. Since 1997, this organism has not been detected in either MWD's source water or treated water.

Conservation

Water is our most precious natural resource and with some conservation practices, we will have it when we need it. Check your water meter to see if it is spinning when all your water is turned off. If the dial is still moving, you probably have an undetected leak somewhere on the property. With the right landscape, irrigation maintenance and new high-efficiency irrigation parts, outdoor water conservation is easy. Plan and design your landscape for aesthetics and most of all, water efficiency. Turf is the biggest water user so be selective with this landscape component and in some situations lawn can be replaced with trees, shrubs, boulders, pathways or mulched areas.

How can I get involved?

For additional water quality or conservation information, please contact RMWD's Customer Service at (760) 728-1178 or visit our website at www.rainbowmwd.com. We want you, our valued customers, to be informed about your water utility. If you want to learn more, you are invited to attend any of our regularly scheduled Board of Directors meetings. Meetings are held every fourth Tuesday of the month at the District located at 3707 Old Highway 395, Fallbrook, CA 92028. Check the website for times.

The District works around the clock to provide top quality water to every tap. We ask that all of our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.

PRIMARY STANDARDS – MANDATORY HEALTH-RELATED STANDARDS

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
MICROBIOLOGICAL					
Total Coliform Bacteria (b)	0 in the year	0	No more than 2 positive monthly samples	0	Naturally present in the environment
Fecal Coliform or E. coli	0 in the year	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or E.coli	0	Human and animal fecal waste

INORGANIC COMPOUNDS						
Lead and Copper (to be completed only if there was a detection of lead or copper in the last sample set)	**No. of Samples Collected**	**90th Percentile Level Detected**	**No. of Sites Exceeding AL**	**AL**	**PHG**	**Typical Source of Contaminant**
Copper (d) (ppm)	30	.36	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits.
Lead (d) (ppb)	30	<0.005	0	0.015	0.2	Internal corrosion of household water plumbing systems; Discharges from industrial manufacturers, erosion of natural deposits.

Parameter (a)	**Average**	**Range**	**MCL [MRDL]**	**(MCLG) [MRDLG]**	**Major Sources in Drinking Water.**
DETECTION OF CONTAMINENTS WITH A PRIMARY STANDARD					
Fluoride (ppm) Treated	0.80	.7-1.0	2.0	1.0	Erosion of natural deposits; water additive for tooth health
Haloacetic Acids(HAA5) (c)(ppb)	10	0-13	60	NA	By-product of drinking water chlorination.
TTHM (c)(ppb) [Total trihalomethanes]	20	12-26	80	NA	By-product of drinking water chlorination.
Total Chlorine Residual (ppm)	1.9	1.7-2.2	[4]	[4]	Drinking water disinfectant added for treatment.
RADIONUCLIDE (pCi/L)					
Gross Alpha Particle Activity (pCi/L)	ND	ND-3	15	(0)	Erosion of natural deposits.
Gross Beta Particle Activity (pCi/L)	ND	ND -5	50	(0)	Decay of natural and man-made deposits.
Uranium (pCi/L)	1	ND-2	20	0.43	Erosion of natural deposits.
SECONDARY STANDARDS - AESTHETICS STANDARDS					
Chloride (ppm)	84	83-86	500	NA	Runoff/leaching from natural deposits; Seawater influence.
Color (units)	2	1-2	15	NA	Naturally-occurring organic materials.
Specific Conductance (umho/cm)	850	830-870	1600	NA	Substances that form ions when in water; seawater influence.
Sulfate (ppm)	170	170-180	500	NA	Runoff/leaching from natural deposits; Industrial wastes.
Total Dissolved Solids (TDS) (ppm)	510	500-520	1000	NA	Runoff/leaching from natural deposits.
ADDITIONAL PARAMETERS					
Hardness (ppm)	230	230-240	NA	NA	Leaching from natural deposits.
Sodium (ppm)	80	78-81	NA	NA	Runoff/leaching from natural deposits; Seawater influence.
Boron (ppm)	120	120	NA	NL=1	Leaching from natural deposits.

Este informe contiene informacion muy importante sobre la calidad de su agua beber. Traduscalo o hable con alguien que lo entienda bien.

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Municipal Water District

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High Pressure Areas

Due to the hilly topography of the District, many portions of our service area are subject to high water pressure. So what can consumers do to protect their water system?

The California Plumbing Code requires pressure regulators on water supply inlets to homes and buildings wherever local static water pressure is in excess of eighty (80) pounds per square inch. Your house may already have a pressure regulator to protect against high pressure, but they are usually located where your pipe enters the building.

What about the water line from the meter to your home? Usually, the line from the meter to the house remains unprotected. Some areas have District-installed and owned pressure regulators that are in front of the meter. **Those devices are only installed to protect the District's meter from high pressure, not your water line.** If you want to protect your line from high pressure coming into your property, we highly recommend you install a pressure regulator right after the meter.

If you have any questions about pressure, please contact Customer Service at (760) 728-1178.

Terms & Abbreviations

In this table, you will find many terms and abbreviations you may not be familiar with. To help you better understand these terms we've provided the following definitions:

AL – *Regulatory Action Level:* The concentration level of a contaminant, which if exceeded triggers treatment or other requirements, which a water system must follow.

MCL – *Maximum Contaminant Level:* The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to public health goals (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to Protect the odor, taste, and appearance of drinking water.

MCLG – *Maximum Contaminant Level Goal:* The maximum level of a contaminant where there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

mg/L or ppm – Milligrams per liter (mg/L) or Parts per million (ppm) *1 part per million = 1 drop in 10 gallons.*

MRDL – *Maximum Residual Disinfectant Level:* The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap.

MRDLG – *Maximum Residual Disinfectant Level Goal:* The level of disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.

NA – *Not applicable.*

ND – *None Detected:* Laboratory analysis indicates that the constituent is not present.

NL – *Notification Level:* Notification levels are health based advisory levels established by CDPH

NTU – *Nephelometric Turbidity Units:* A measure of the cloudiness of the water.

pCi/L – *PicoCuries per liter:* A measure of radioactivity.

PHG – *Public Health Goal:* The level of contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Agency.

PDWS – *Primary Drinking Water Standard:* MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

TT – *Treatment Technique:* A required process intended to reduce the level of a contaminant in drinking water.

Umho/cm – Micromhos per centimeter (a measure of a substance's ability to convey electricity).

ug/L or ppb – Micrograms per liter (ug/L) or Parts per billion (ppb). *1 part per billion is = 1 drop in 10,000 gallons.*

(a) Data shown are annual averages and ranges.

(b) Total coliform MCLs: For a water system collecting fewer than 40 samples per month, no more than 1 of the monthly samples may be total coliform positive.

(c) Calculated from the running annual average of quarterly samples.

(d) The Federal and State requirements for exceeding the action levels may include installing corrosion control treatment, collecting water quality parameter samples, or replacing lead service lines.

We have learned through our monitoring and testing that some contaminants have been detected. However, the EPA has determined that your water meets all drinking water health standards at these levels (c).